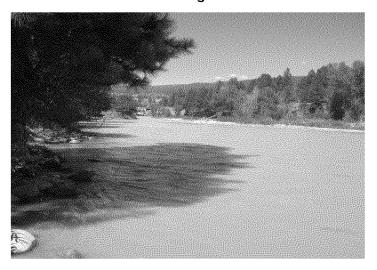
# U.S. ENVIRONMENTAL PROTECTION AGENCY POLLUTION/SITUATION REPORT 2015 Gold King Mine Blowout - Polrep/Sitrep Initial Polrep/Sitrep



# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY Region 8



Subject: SITREP #3

Initial Situation Report Gold King Mine Blowout San Juan County, Colorado

Latitude: 37.8945 Longitude: -107.6384

To:

Thru: David Ostrander, Regional Incident Coordinator

From: R8 IMT Situation Unit

**Date:** 08/10/2015

Reporting Period: 08/07/15 through 08/10/15

All highlighted sections are unique to this document; the Executive Summary will be updated each day.

#### **Executive Summary**

On August 5, 2015, EPA was conducting an investigation of the Gold King Mine. The intent of the investigation was to create access to the mine, assess on-going water releases from the mine to treat mine water, and assess the feasibility of further mine remediation. The plan was to excavate the loose material that had collapsed into the cave entry back to the timbering. During the excavation, the loose material gave way, opening the adit (mine tunnel) and spilling the water stored behind the collapsed material into Cement Creek, a tributary of the Animas River.

Initial estimates are that the release contained approximately one million gallons of water (estimated from the dimensions of the mine adit) that was held behind unconsolidated debris. USGS measured increased flows at a streamgage starting at about 12:30 p.m. and ending about 7:15 p.m. This resulted in a provisional calculated flow volume of 3,043,067 gallons discharged from the Gold King Mine. The EPA's original estimate of 1 million gallons discharged from the Gold King Mine was based on an estimate of the size of the adit. A streamgage is an instrument that measures volume by measuring flow, which is much more precise.

On August 9<sup>th</sup>, The City of Durango and La Plata County have proclaimed a State of Local Emergency in their jurisdictions due to the contamination of the Animas River. The declaration was made after consultation with the Southern Ute Indian Tribe, Town of Silverton, San Juan Basin Health Department, San Juan County, Colorado, and San Juan County, New Mexico and is in response to the release of approximately one million gallons of waste water from the Gold King Mine in San Juan County, Colorado triggered by work that the Environmental Protection Agency (EPA) was doing to investigate contamination at the mine. In declaring a State of Local Emergency, the City and County activate the response and recovery aspects of their local disaster emergency plans, which allows resources to be shared among responding agencies.

Water treatment at the Gold King Mine site continues and adit discharge water is running clear. However, activity in the creek causes episodes of sediment to re-entrain (word?) and the creek runs orange for short periods. For example, the county conducted work on culverts at stream crossings and/or dirt has sluffed off the steep side walls of their work areas, which stirred sediments.

#### 1. Introduction

1.1 Background

Site Number: A8K9 Contract Number: D.O. Number: Action Memo Date:

Response Authority: CERCLA Response Type: Emergency

Response Lead: EPA Incident Category: NPL Status: Operable Unit:

Mobilization Date: 08/05/2015 Start Date: 08/05/15

EPA's IMT has deployed to Durango and is establishing its Region 8 command. Regions 9 and 6 are establishing their command. All three regions and headquarters are working to establish Area Command. The Area command will develop broad objectives for the impacted area and coordinate the development of

Demob Date:

CERCLIS ID: RCRIS ID:

ERNS No.: State Notification: 08/05/15

1.1.1 Incident Category

1.1.2 Site Description.

1.1.2.1 Location San Juan County, Colorado, and La Plata County, Colorado.

#### 1.1.2.2 Description of Threat

Approximately three million gallons of mine waste water was released into Cement Creek and the Animas River. The primary environmental concern is the pulse of contaminated water containing sediment and metals flowing as an orange-colored discharge downstream through Durango, Colorado, and into New Mexico and Utah. The City of Durango relies on the Animas River as one of its water sources - the Animas source is off-line, and they are continuing to provide clean drinking water to the City. The river is also used for recreational purposes, including fishing and rafting. At the confluence of the Animas River and the San Juan River in New Mexico, there is a designated critical habitat for the Colorado Pike Minnow fish and the Razorback Sucker fish.

## 1.1.3 Preliminary Site Inspection Results

Water sampling has occurred, and pH levels and dissolved concentrations of metals are being monitored. There were 4 River and 30-40 well water samples collected August 10, 2015. There are 7 consistent locations for daily river sampling. Samples were to be sent to the EPA Laboratory, in Golden CO for analysis. Further laboratory analysis using CLP (Contract Laboratory Program) are being put into place. The labs will have 24-hour turn-around and will be EPA Drinking Water Certified. All samples analyzed will be compared to both drinking water MCLs, and Animas River toxicity screening values for both human and ecological receptors.

EPA continues to collect river and well water samples. EPA is also developing a plan to address sediment in the river; this will include plans for sampling and analysis to determine response actions.

#### 1.2 Incident Objectives

Maintain safety of responders.

Protect the drinking water supply of the City of Durango, Colorado, and others who may be using the river for various purposes.

Continue to provide potable water for impacted residents and livestock operations.

Continue water treatments at Gold King Mine; start testing sediment samples.

Developing a strategy to address the irrigation ditches.

#### 1.3 Critical Resource Needs

No information available at this time.

#### 1.4 Strategic Considerations

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#### 2. Current Activities

## 2.1 Operations Section

#### 2.1.1 Narrative

EPA teams continue to sample residential drinking water wells and provide potable water to those impacted.

Crews continue to stabilize the Gold King Mine site and treat adit discharge water. The flow from the Gold King mine was measured at 548 gallons per minute as of noon on August 8. The mine water is being treated in a series of settling ponds constructed near the portal. The treatment appears to be effective. The pH (acidity) of the water is being raised with the addition of lime and sodium hydroxide solution to facilitate sedimentation of the metals in the ponds. Flocculant is being added to increase the amount of sedimentation. The treated water that is being discharged to Cement Creek has a pH of 5.5.

EPA's ASPECT (Airborne Spectral Photometric Environmental Collection Technology) aircraft conducted aerial observations of the site area. Specifically aerial imagery of the leading edge of the plume was collected. This information is available on the website (link). ASPECT operations are now complete OR being handled by Region 9, etc.

#### 2.1.2 Response Actions to Date

Water quality sampling by EPA Region 8 staff has occurred and START is taking more samples today. EPA Region 8's lab in Golden, Colorado, (ESAT) and a local lab in Durango, are being used to analyze the samples. Meetings were held with San Juan County, Colorado, officials, and La Plata County, Colorado, officials yesterday. ATSDR consulted San Juan County, Colorado, with them on personal safety issues for people potentially affected by the contaminated water.

County Officials toured the Gold King mine site on 8/10 and were able to see the settling ponds and ask questions about the process. The Governor of Colorado is planning on visiting the site tomorrow.

A claims process exists for compensating citizens who suffer personal injury or property damage caused by U.S. government actions. The process is available in the EPA's regulations at 40 CFR Part 10, and includes guidance on documentation that may be required to support claims for loss of employment and loss of income, among other claims. EPA distributed information about points of contact and required forms to begin getting information and initiate the claims process.

Additional public meetings were held 8/9/2015 and 8/10/2015.

- 2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)
- 2.1.4 Progress Metrics
- 2.2 Planning Section
  - 2.2.1 Anticipated Activities

#### **2.2.1.2 Next Steps**

EPA's IMT has deployed to Durango and is establishing its Region 8 command. Regions 9 and 6 are establishing their command. All three regions and headquarters are working to establish Area Command. The Area command will develop broad objectives for the impacted area and coordinate the development of

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#### **2.2.2 Issues**

#### 2.3 Logistics Section

EPA's IMT has deployed to Durango and is establishing its Region 8 command. Regions 9 and 6 are establishing their command. All three regions and headquarters are working to establish Area Command. The Area command will develop broad objectives for the impacted area and coordinate the development of objectives and strategies.

#### 2.4 Finance Section

#### 2.4.1 Narrative

Stood up on August 7, 2015. Region 8 deployed Finance Chief to Durango.

#### 2.5 Other Command Staff

#### 2.5.1 Safety Officer

Region 8 deployed a Safety Officer to Durango.

#### 2.5.2 Liaison Officer

No Information at this time

#### 2.5.3 Information Officer

A public meeting was held in Durango August 10th at 6pm.

#### 2.5.4 Weather Forecast

Weather forecast for Monday, August 10, 2015:

#### Today

Partly cloudy. A stray shower or thunderstorm is possible. High near 85F. Winds SSW at 5 to 10 mph.

#### **Tonight**

Partly to mostly cloudy with scattered showers and thunderstorms developing overnight. Low around 55F. Winds N at 5 to 10 mph. Chance of rain 40%.

#### 3. Participating Entities

# 3.1 Unified Command

# 3.2 Cooperating Agencies

Colorado Parks & Wildlife officials have been monitoring the effects of the spill on terrestrial & aquatic wildlife since the incident began. "We are watching for any impacts on wildlife, whether they are acute or chronic," said Patt Dorsey, southwest regional manager for CPW.

"Fish are especially sensitive to changes in water quality," she said.

"We are following a standard protocol and are monitoring sentinel fish at 3 stations in the Animas." CPW is also monitoring a control station on a clean tributary.

Colorado Parks and Wildlife is optimistic that the effects of the spill on terrestrial wildlife will be minimal.

The La Plata County Sheriff issued an order closing the Animas River to all watercraft from the north County line (San Juan County, Colorado) to the south County line (at the Colorado/New Mexico State line) until further notice. Furthermore, all such watercraft must be removed from the Animas River within the locations cited above. The decision was made after consultation with the EPA, CDPHE, the San Juan Basin Health Department, and representatives of the Southern Ute Indian Tribe. The Order will remain in effect until it is determined that the river is safe.

US Fish and Wildlife Service and the US Department of Interior have been contacted about the incident.

# Bureau of Reclamation will be contacted concerning the situation.

# 4. Personnel On Site

Gold King Mine Blowout 2015	
	08/10/2015
Group	Number
EPA @ REOC	21
Contractors @ REOC	2
EPA in Field (R8)	17
Contractors in Field	15
WERT Reg 8	O

#### 5. Definition of Terms

No information available at this time.

#### 6. Additional sources of information

No information available at this time.

#### 7. Situational Reference Materials

No information available at this time.